Maine Farm Safety Program

Bulletin #2329

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Power Tool Safety

Safety plays a big part when working with power tools. Anything, from someone interrupting a person at work to a faulty electric connection, can be hazardous.

◆ Personal Protection

Use appropriate safety equipment, such as goggles, earplugs and dust masks. Do not wear gloves when working with most tools. Always wear eye protection when working with metal. Do not wear sandals, open-toed or canvas shoes when working with tools. Avoid loose-fitting clothes that might become entangled in a power tool. Remove rings and other jewelry.

Do not operate power tools when you are ill, taking strong medications, fatigued or consuming alcoholic drinks. Do not smoke while working with tools.

◆ Before Using Power Tools

When buying power tools to be used on the farm, take into consideration the weight, shape, size and use of the tool. Hold the power tool as it would be used and think about problems and accidents that could arise. Note the hand and wrist positions and forces or effort required to use the tool. Ask if the tool can be used in either hand. Consider the handle position, balance and center of gravity, along with the weight of the tool. Make sure all guards, automatic brakes and safety devices are in place.

Read the owner's manual before using any tool. Never use a tool unless trained to do so. Inspect it before each use and replace or repair if parts are worn or damaged. Repair tools only if

Power Tool Safety

- **Choose the correct tool for the job.**
- **Keep work areas around power tools tidy.**
- **Wear eye, hearing and respiratory protection when warranted.**

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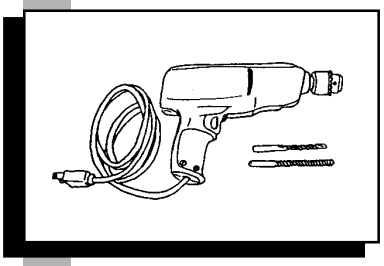
you are trained to do so. Inspect screws, nuts, bolts and movable parts to make sure they are tightened. Make sure the cord will not become caught or tangled. The cord should be flexible, but not easy to knot. Clean the cord regularly and inspect the grounding connections. Use a ground fault circuit interrupter when working with power tools.

Use the correct tools for the job. Do not use a tool or attachment for something it was not designed to do. Select the correct bit, cutter or grinding wheel for the material with which you are working. This saves time and improves the quality of work and reduces the risk of mishap. If necessary, consult the instruction or shop manual, or call a dealer or an expert on tool use.

◆ Repairing and Cleaning Power Tools

Always turn off and unplug a power tool before: (1) adjusting, oiling, cleaning or repairing it; (2) attaching an accessory; or (3) changing bits, blades or grinding wheels. Unplug or lock-out tools when not in use. Unplug tools by pulling directly on the plug. Jerking on the cord can cause damage to the tool. Do not leave tools, hardware and other materials out when not in use. This is especially important if youngsters are in the home.



◆ Work Areas

Keeping workshop and storage spaces clean and dry can help prevent many accidents. Sparks can ignite scraps, sawdust and solvents. Water can conduct electricity. Do not stand in water, on damp floors or in the rain when working with electrical tools. Keep hands and tools dry.

Make sure workshops and storage areas have the proper electrical wiring and outlets needed to run power tools. Install adequate wiring to handle the electrical load required. All outlets should have three-pronged plugs or be double-insulated. Any outlets that may come in contact with water should have ground fault circuit interrupters. Never use indoor tools outside. Use only approved outdoor extension cords. Use one long extension cord instead of several short ones. Do not damage or cut extension cords.

When working on ladders or scaffolding, rest power tools on a flat surface or in a bin secured to the ladder itself. A falling tool can seriously injure a co-worker or bystander. Never carry heavy power tools up and down ladders.

Stop working and turn off the power tool you are working with if distracted by something or someone. Never look away from your work when operating a power tool.

Cutting tools can be particularly dangerous. If one stalls, switch off the power and unplug the tool before trying to restart it. When using a power saw, let the saw reach full speed before cutting and support the work firmly so it won't shift. Never use your

hands to clear the scraps from a sawing work table. Use a long stick instead.

When working with metal, secure the metal materials with clamps or in a machinist's vise to keep it from moving.

Take extra care when working with hazardous materials. Handle fiberglass with care. Its particles can irritate the skin, eyes and respiratory system. When soldering, remember that lead solder is toxic. The work area should be ventilated, and you should wear a small respirator.

Avoid operating power tools in locations where sparks could ignite flammable vapors. Keep your shop well ventilated and flammable materials properly stored.

◆ Safety Measures

If your workshop is set up in the basement, garage or any other room, keep a first aid kit at hand, and if possible, a telephone with a list of emergency numbers. Install an all-purpose fire extinguisher and smoke alarms in the area where tools are used.

◆ Rags

Used rags, especially oily and greasy ones, should be kept in a covered metal container. Rags should be a safe distance from the welder.

Safety for Specific Power Tools

Drills: Use hand drills in muddy or wet locations if possible. If not, stand on something dry and avoid contact with a grounded object. Use double-insulated or properly grounded drills. Use only good quality bits. Select the proper size and type of bit for the job. Make sure it is sharp and not damaged. Do not over-force the drill into hard material as the bit might break. If the speed can be varied, operate the drill at the correct speed, and do not lock the switch of a hand-held drill in the on position.

Table Saws: Adjust the table saw blade to project about 1/8 inch above the wood. Make certain the workpiece is out of contact with the blade when starting or stopping the saw. Keep the body out of the way. Use a push stick when ripping narrow strips. Lower the saw blade below the table top when work is finished.

Radial Arm Saws: When cross-cutting wood, lay the stock solidly on the table and against the back guide. The saw blade should rotate downward as viewed by the operator. Pull the saw with one hand while the stock is held with the other hand. Never reach across the line of cut. When making miter cuts, secure the locking devices to prevent the saw from changing angles or digging in. Return the saw to the rear position after completing a cut.

Band Saws: Keep the saw blade set evenly and with the correct tension. Push the stock through the blade with the hands on both sides of the line of cut.

Hand-Held Circular Saws: Do not work in wet areas unless standing on a dry surface and make certain the saw is properly grounded. Do not clamp or wedge the guard in the open position. Keep your finger off the trigger when carrying the saw. Do not cut the power cord. Wait until the blade stops before laying down the saw. When finished, unplug the saw and put it out of the reach of children.

Saber Saws: Select the proper blade for the job. Make sure it is sharp, undamaged and securely tightened in place. Do not turn on the saw when the blade is in contact with the workpiece. Hold the saw firmly with one hand and steady the work with the other. Keep your hand and other objects clear of the blade.

Grinders: Never operate grinders without protecting your eyes with safety glasses, goggles, or a face shield. If the material being worked on will produce a lot of dust or other particles, wear a dust mask or filter respirator. Make sure the grinder has guard housing. Place the tool rest 1/8 from the wheel on bench-mounted units. Before starting a portable grinder, look to see where the sparks might fall. Clean the work area if necessary. Allow the wheel to reach full speed before stepping into the grinding position. Grind on the face of the wheel unless otherwise designed. Use a vise-grip plier or clamp to hold small pieces. Move the workpiece slowly across the wheel face. Allow the wheel to stop naturally when turning it off. Periodically check for soundness of grinding wheels. Replace badly worn, cracked or out-of-round wheels.

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